



TEACHER LESSONS

The Tech for Global Good: Organizing Activism

Objectives

Students will be able to:

- Perform research to deconstruct the factors surrounding the global Internet-access problem.
- Design a creative and empathetic solution that empowers individuals to take a stand without the Internet.
- Develop a realistic plan to influence tangible change connected to the overall problem and take action in their community.

Overview

Though it may be difficult to imagine living without Wi-Fi, just under half of the world's population lives without any access to the Internet.¹ This lack of connectivity not only affects citizens' access to communication, education, and healthcare—but it also dramatically impacts individuals' ability to take a stand, organize activism, and create change. In this lesson, students will learn more about this problem in alignment with a series of video clips featuring [Amanda.mobi](#), a community activism organization that empowers citizens to use their cell phones to organize to make a difference.

To explore this problem and gain empathy, students will research the role the Internet plays in global campaigns, the effects of the digital divide, and possible alternatives to the Internet. Students will then collaborate and use design thinking to tackle the problem as they consider how technology could be used to organize change and positively impact those affected. The lesson will culminate as students brainstorm how to inspire their own community members to find their voice and create change. They will create a brief plan that outlines how they could spearhead this change and take action in their community.

This lesson focuses on

Design Process

- Defining the Problem
- Designing Solutions

21st Century Skills

- Communication
- Collaboration
- Critical thinking
- Creativity

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Grades

6–8

Timing

190 minutes

Materials

All sessions:

- Device with the ability to project video, one for the teacher

Problem

- *Problem* video clip
- Handout 1: Research the Problem (two pages), one per student
- Devices with Internet access, one per student (or at least enough for half the class)

Solution & Impact

- Handout 2: Design Thinking (three pages), enough for one-third of the class
- Handout 3: Solution Storyboard (two pages), enough for one-third of the class
- Handout 4: Imagine the Impact, enough for one-third of the class
- *Solution* and *Impact* video clips

What Can I Do?

- Six pieces of chart paper, each labeled according to the instructions below*
- Markers, one per student
- *What Can I Do?* video clip
- Handout 5: Create Change (two pages), one per student

*Chart Paper Prep: Each of the following questions should be written and circled in the middle of two pieces of chart paper:

- **Educate:** What changes have occurred recently **and** throughout history because someone decided to take a stand?
- **Empathize:** What obstacles may change-makers face?
Act: How can you and other students stand up for a cause you believe in?

Background Information

The following section provides background on topics covered in this lesson. While it is designed for educators, this information may also be shared to supplement students' understanding as needed, *after* the lesson's Problem section has been completed.

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Have you ever wondered...

How accessible is the Internet to people around the world?

Just under 54% of the global population has Internet access. This means that roughly 3.6 billion people are still offline—including nearly 20 million people in rural America.^{1,2} In a recent report by the International Telecommunication Union, which is an agency within the United Nations, the director of its telecommunication development bureau said: “Even where connectivity exists, we need to be more creative in addressing critical issues like affordability of service, cost of handsets, and lack of digital skills and literacy to enable more people—and especially women—to participate and flourish in the digital economy.” Whereas 58% of all men globally are connected to the Internet, only 48% of all women have the same access. This digital gender gap, which is largest in Asia Pacific, Africa, and the [Arab states](#) is only continuing to grow.¹

What ideas have been implemented to help people communicate and advocate for change without the Internet?

The Internet has given many social change movements the voice and the power they need to expand their reach and their impact. However, in communities where the Internet is still not accessible to all, organizations have implemented a variety of solutions. Communities in Nigeria, for instance, are now using Community Information Boards instead of online databases. These boards, which resemble simple chalkboards, are distributed with a pre-made grid designed to track children’s health and development. Adults are trained on how to use these boards to record data, as well as how to use the information they collect to make decisions regarding community health. Another example exists in Sierra Leone: Instead of web alerts, citizens rely on “hotspot busters,” which are people who inform communities of Ebola outbreaks as soon as they occur. They travel from house to house to raise awareness and distribute a hotline number that people may use to refer family members to a hospital.³ An additional example is one that students will learn in this lesson: Instead of web-based social change campaigns, the South African community advocacy organization *Amandla.mobi* shows people how to use text messages to organize, spread the word, and take action with others.⁴

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Make Connections

How does this connect to students?

While some students may take their Internet access and 4G phone service for granted, this isn't the case for all Americans. Roughly 20 million people in the United States, mainly in rural America, lack any kind of Internet service. An additional 24 million Americans don't have access to broadband (or high speed) Internet. This affects Americans' daily lives and can influence everything from their basic education to their job prospects.⁵

On the other end of the spectrum, the Internet is empowering young people to achieve greater things than ever before. Take, for example, the Global Climate Strike. Thanks to the power of the Internet, young people around the world were able to organize a strike that occurred on every continent and involved more than four million people.⁶

As students grow up and begin their own careers, it will be important for them to keep in mind the potential that the Internet has to create great change, as well as how to reach people affected by the digital divide.

How does this connect to careers?

App Developer: App developers are computer software engineers who create, program, and test apps for mobile devices and computers. Their apps may be created for the general public or for use by a specific group, and they may focus on a variety of goals—including social good.

Social Marketer: Social marketers create programs and promotions aimed to positively influence the public, often in matters of public health. In recent years, social marketing campaigns have been successful in inspiring a wide variety of social changes around the world, from disease awareness to getting out to vote.

Social Action Product Manager: These specialized product managers help identify opportunities for change and lead the development of new social action tools. Once the public has used their tools, these managers will analyze the results and suggest product optimizations.

How does this connect to our world?

Nearly half of the world's population continues to lack access to the Internet. Compared to those who have Internet access, these people have fewer opportunities related to careers, education, communication, healthcare, and government services. This digital divide more strongly impacts rural and developing regions of the world and has a disproportionately negative effect on women.¹

One way in which countries around the world are uniting to work toward a solution is through the United Nations' Sustainable Development Goals. The overall premise of these 17 goals is to create a "shared blueprint for peace and prosperity for people and the planet." Each goal has its own focus, and *Sustainable Development Goal 9: Industry, Innovation and Infrastructure* is striving to "build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation" and increase worldwide access to and use of computers and the Internet.⁷

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Sources:

1. "Growing internet uptake could risk widening gender inequality." CNBC: Make It. [cncb.com/2019/11/07/itu-report-growing-internet-uptake-could-risk-widening-gender-gap.html](https://www.cnbc.com/2019/11/07/itu-report-growing-internet-uptake-could-risk-widening-gender-gap.html).
2. Before we solve the world's problems, we need to connect it to the internet. Quartz. [qz.com/1233010/before-we-solve-the-worlds-problems-we-need-to-connect-it-to-the-internet](https://www.qz.com/1233010/before-we-solve-the-worlds-problems-we-need-to-connect-it-to-the-internet).
3. "Communication for Development." UNICEF. [unicef.org/cbsc/index_42347.html](https://www.unicef.org/cbsc/index_42347.html).
4. "About." amandla.mobi/about.
5. "What It's Like to Live in America Without Broadband Internet." Vice. [vice.com/en_us/article/d35kbj/americans-who-dont-have-internet](https://www.vice.com/en_us/article/d35kbj/americans-who-dont-have-internet).
6. "How big was the global climate strike?" Vox. [vox.com/energy-and-environment/2019/9/20/20876143/climate-strike-2019-september-20-crowd-estimate](https://www.vox.com/energy-and-environment/2019/9/20/20876143/climate-strike-2019-september-20-crowd-estimate).
7. "Sustainable Development Goals." Sustainable Development Goals Knowledge Platform. sustainabledevelopment.un.org/?menu=1300.

Blueprint for Discovery

PROBLEM: 65 minutes

1. Begin class by asking students to think about and share large social movements (marches, protests, etc.) that have occurred in the past several years. Examples may include March for Our Lives, the Women's March, Arab Spring, and the Global Climate Strike. (5 minutes)
2. If any of your students participated in the Global Climate Strike, encourage them to describe their experience. Then show this article's [video](#) to provide background information for those who did not attend. Explain that this worldwide strike consisted of more than 2,500 events in 163 countries on all seven continents. It was one of the biggest climate events in the world's history, and it was led by Greta Thunberg, a 16-year-old Swedish climate activist.

Ask: How could one person inspire such a huge movement? How did YOU hear about it? (5 minutes)
3. Visit and project globalclimatestrike.net. After scrolling through the homepage, click over to the Resources → Promotional Materials dropdown and take a moment to look through the resources they provide to "spread the word." Ask students: What seems to be key to the success of this campaign? Answer: The Internet! (5 minutes)
4. Show *The Problem* video segment. As they watch, encourage students to think about the pros and cons of using the Internet to organize around issues. When the video is complete, ask students to share their thoughts with a partner. (5 minutes)

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5. Lead the class in a full-group discussion around the following questions:
 - Do you think it makes sense that most of today’s social activism movements rely on the Internet? Why or why not?
 - What are some characteristics of communities who are the most likely to benefit from Internet-based activism? Least likely to benefit?
 - Why should there be a variety of ways for people to take a stand and organize around issues they care about? Consider all types of issues: big and small. (10 minutes)
6. Explain that before students try to develop a solution to this problem, as the video clip challenged them to, they will conduct Internet research to deepen their understanding of the issue.
7. Divide students into groups of three, and pass out one copy of Handout 1: Research the Problem to each student. Each student will also need a device.* Explain that students will follow the step-by-step directions on the handout in order to better understand the problem. Allow students about 30 minutes to perform their research. If they have extra time, they may use the Internet to search for additional relevant information.

*If 1:1 devices are not available, students may share a device and read both articles together or the articles may be printed in advance.
8. When their research is complete, bring the class back together and discuss:
 - Think about how information is spread through each of the channels that you researched. Who has control over the information that is shared?
 - Explain that in some societies, the government censors information that the media shares. Ask: How could this impact citizens’ ability to speak out and make a difference? (5 minutes)

SOLUTION & IMPACT: 70 minutes

1. Now that students have a deeper understanding of the problem, explain that they are ready to tackle the question that the video clip presented: How would you solve this problem?
2. Distribute one copy of Handout 2: Design Thinking to each group of three. Review the handout’s directions and explain that students will collaborate to brainstorm how people without access to the Internet may organize around issues they care about.

Students should be creative as they ideate information-sharing systems. While they need to be conscious of the constraints that Internet is not always available and that governments may censor information spread on mass media, they can use the Internet as part of their solution. If technology is part of their solution, they don’t need to know if their tech functionality is currently possible as long as it could potentially help solve the problem.

Allow groups about 15 minutes to brainstorm possible solutions.

3. Distribute one copy of Handout 3: Solution Storyboard and Handout 4: Imagine the Impact to each group.

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First, review the instructions on Handout 3 and explain that the next step in the design process will be to select one solution that they think will be able to reach the most people.

Then review Handout 4's instructions, and reiterate the importance of designing a solution that will help people organize around issues they care about without the Internet. If needed, walk through the handout's layout and the way in which it demonstrates a solution's ripple effects. For instance: When people in rural communities around the world are able to communicate and organize themselves as they push for change, governments may take them more seriously, which may in turn inspire more people to fight for what they believe in, etc.

Give groups about 30 minutes to work.

4. Then bring the class back together to show the *Solution* and *Impact* video segments. Instruct students to think about how their solution and impact compares to the solution presented as they watch. (5 minutes)
5. When the video viewing is complete, ask each group to compare and contrast the actual solution and impact with their own ideas, and challenge them to optimize their own solution in at least one way. Allow groups about 10 minutes to make edits directly to their storyboard.
6. For the time remaining in the session, conclude with conver-stations* around the following questions:
 - Do you think your solution will be more or less effective than the solution discussed in the video? Why?
 - Which solution (your own or the video's) do you think has the potential to effect change more quickly? Which solution has the potential to create the most lasting change? Why?
 - How could you alter your solution to give even more people access to the ability to organize and take a stand?

* For conver-stations to take place, create small groups of four to six students around the classroom. Share the first question and allow groups a few minutes to discuss their answer. Then instruct two or three members from each group to rotate to a new group. The new groups should take a moment to quickly recap their previous discussion, and then the next question will be asked and discussed.

WHAT CAN I DO?: 55 minutes

Instructor Prep: Before this class session, place one set of the *Educate*, *Empathize*, and *Act* chart papers in one half of the classroom and the other set in the other half of the classroom. See the Materials section for more details.

1. As this session begins, distribute a marker to each student. Assign half of the class to one side of the classroom and the remaining students to the other side of the classroom.
2. Explain that students will stay in their assigned half of the classroom and silently visit the three chart papers labeled *Educate*, *Empathize*, and *Act*. Explain (or—if one or more of the other Tech for Global Good lessons has already been completed—review) that these are three different steps that they, as students, can take to help create change.

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Without talking, students should:

- Read the question in the center of each piece of chart paper.
 - Jot a thought related to the question. This thought may be an answer, a related question, or a response to something a peer has already written.
 - Circle their response and draw a line to connect it to the comment or question to which they are replying.
 - Move to another piece of chart paper and repeat the procedure.
3. Tell the class that they will have about 5 minutes to read the three questions, scan the thoughts their peers have already written, and jot their own answer. Then instruct them to silently begin!
 4. Once the activity is complete, review the chart papers' webs with your class. Point out consistent ideas as well as novel ones, and discuss any unanswered questions. (5 minutes)
 5. Then show the *What Can I Do?* video segment. As students watch, encourage them to listen for additional ideas that can be added to these three categories and add these ideas when the clip is complete. (5 minutes)
 6. Challenge students to consider what they can personally do now to take a stand and create change. Distribute one Handout 5: Create Change to each student, and review the step-by-step directions. Reiterate that individual students or pairs will select one way they can take action in their own community and create a plan for carrying it out. As they develop their plan, they should consider if it could be strengthened by including technology* that already exists. If so, they should incorporate this technology into their action plan. (20 minutes)

*If your students would benefit from technology suggestions, you may share the list below. Alternatively, students could also perform their own Internet research to find tech resources or products that align with their change idea.

- Educate:
 - Informative websites/articles about famous and everyday people who have taken a stand, such as [BBC](#), [ONE](#), or [Biography.com](#)
 - [Interactive Timeline](#) featuring youth-led movements
 - Nonprofits and organizations focused on creating change and helping those in need, such as [Amandla.mobi](#), [DoSomething.org](#), and [Changemakers](#)
 - Social Impact Campaign [websites](#) that are making a difference on a large scale
 - Videos such as the TED Talks Playlist: [Small Ways to Change the World](#)
- Empathize:
 - The *Educate* websites from above can be used to better understand how taking a stand can impact the lives of others.
 - Learn more about problems facing the world using web resources such as United Nations' Global Issues Overview or online news sources like [Newsela](#) or [The Learning Network](#).

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- Listen to free podcasts that explain the need for and effect of social change, such as those available through [Apple Podcasts](#) or [Google](#).
- Find someone who has led or been part of a recent or past social movement and interview them about how their lives were affected (remember to ask family and community members). If a face-to-face conversation is not possible, consider technology-facilitated communication such as Skype, WhatsApp or Facetime.
- Act:
 - Use a relevant social media platform(s) to create a targeted campaign.
 - Start a [blog](#) or write an online news editorial.
 - Create a presentation for a target audience that promotes a specific action using [PowerPoint](#), [Google Slides](#), [Prezi](#), [iMovie](#), etc.
 - Use a website designed to help citizens create change, such as [Change.org](#) or [VolunteerMatch](#).
 - Be politically active with these “low-tech” [ideas](#) from *The New York Times*.
 - [Find an app](#) designed to help people contribute to causes they care about.
 - Research [careers](#) that could work to create change and inspire others to consider these career paths.
- 7. Allow about 15 minutes at the end of the class session for students to present their ideas to each other. Each student or student pair should share the action they have selected, why this change is important, and the first step they will take toward achieving it.

As students listen to each presentation, ask them to jot a question that will either help them better understand the idea presented or encourage the presenter(s) consider a different perspective. Time permitting, encourage students to ask one of their questions during the presentations!

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National Standards

Next Generation Science Standards

Engineering Design:

- MS-ETS1-1: Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.
- MS-ETS1-2: Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.
- Disciplinary Core Idea:
 - ETS1.A: Defining and Delimiting Engineering Problems: The more precisely a design task's criteria and constraints can be defined, the more likely it is that the designed solution will be successful. Specification of constraints includes consideration of scientific principles and other relevant knowledge that are likely to limit possible solutions. (MS-ETS1-1)
- Cross-Cutting Concept:
 - Influence of Science, Engineering, and Technology on Society and the Natural World: The uses of technologies and limitations on their use are driven by individual or societal needs, desires, and values; by the findings of scientific research; and by differences in such factors as climate, natural resources, and economic conditions. (MS-ETS1-1)

Common Core English Language Arts Standards

Reading:

- R.1: Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
- R.7: Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

Writing:

- W.4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Speaking & Listening:

- SL.1: Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

Standards for Technological Literacy (ITEEA Standards)

Standard 1: Students will develop an understanding of the characteristics and scope of technology. In order to comprehend the scope of technology, students should learn that:

- F. New products and systems can be developed to solve problems or to help do things that could not be done without the help of technology.
- G. The development of technology is a human activity and is the result of individual or collective needs and the ability to be creative.

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Standard 4: Students will develop an understanding of the cultural, social, economic and political effects of technology. In order to recognize the changes in society caused by the use of technology, students should learn that:

- G. Economic, political, and cultural issues are influenced by the development and use of technology.

Standard 6: Students will develop an understanding of the role of society in the development and use of technology. In order to realize the impact of society on technology, students should learn that:

- E. The use of inventions and innovations has led to changes in society and the creation of new needs and wants.
- Social and cultural priorities and values are reflected in technological devices.

Standard 8: Students will develop an understanding of the attributes of design. In order to comprehend the attributes of design, students should learn that:

- E. Design is a creative planning process that leads to useful products and systems.
- G. Requirements for a design are made up of criteria and constraints.

Standard 11: Students will develop abilities to apply the design process. As part of learning how to apply design processes, student should be able to:

- H: Apply a design process to solve problems in and beyond the laboratory-classroom.
- J: Make two-dimensional and three-dimensional representations of the designed solution.

1. Understand the problem:

With your group, read: bit.ly/internetgendergap. Then discuss:

- In the United States, there are about 20 million people without Internet access. How many total people around the world are still offline?
- Why are these people not using the Internet?
- Does this problem affect everyone around the world equally? Why or why not?
- How does this problem specifically affect women in developing countries?
- Are there other groups deeply impacted in specific places as well? Who? How are they impacted?

2. Consider Internet's power:

Select one of these well-known campaigns to research further:

- Women's March: womensmarch.com
- March for Our Lives: marchforourlives.com
- Rock the Vote: rockthevote.org

Then browse its campaign website for a few minutes. As you do, think about and discuss:

- How does this website educate visitors and spread information?
- Who is the main audience of this campaign?
- Does this campaign use social media? How? Why?

3. Research other ways to spread information:

With your group, decide who will research cell phones, radio, and television. As you review the information provided in the links below, answer the chart's questions.

- **Cell phones:**
 - bit.ly/advancedeconomies
 - bit.ly/subsaharan: Focus on the statistics under the *State of Play: 10 Key Stats about Mobile in Africa* header
- **Radio:** bit.ly/radiorulestheworld
- **Television:** bit.ly/payTVmarket

	Audience: Who does this method of communication reach?	Infer: How could this device/media help someone take a stand? What may be difficult about using it to take a stand?	
		Pros (+)	Cons (-)
Cell phones			
Radio			
Television			

4. Share your research:

Wrap up by sharing your information with your group. Record notes in the chart above as you listen to what your group members have learned!

Empathize & Define

Use what you learned during your research to summarize the Internet problem some people face when trying to organize activism and create change. Think about *who* this problem affects and *what* they need.

Ideate

How else could people organize activism and create change, without using the Internet? Be sure to think about the advantages of the Internet and what other solutions would need to accomplish in order to have a similar effect.

Sketch: In the following boxes, illustrate two possible solutions that could help solve this problem you just described. Try to design at least one solution that uses some form of technology. This could be an improvement to a product that already exists or an entirely new tech product.

Be sure to label important parts or features! Continue to brainstorm on a separate piece of paper if you have more than two ideas.

Solution A:

Solution B:

Solution Storyboard, page 1 of 2

STUDENT HANDOUT 3

Directions: Use this storyboard to explain how your solution could help people who don't have Internet access advocate for change. Clearly show how your solution could be used to help solve this problem, as well as who this solution would affect. Each square should show one step, and the end result should be illustrated in the final square. You may use as many squares as needed.

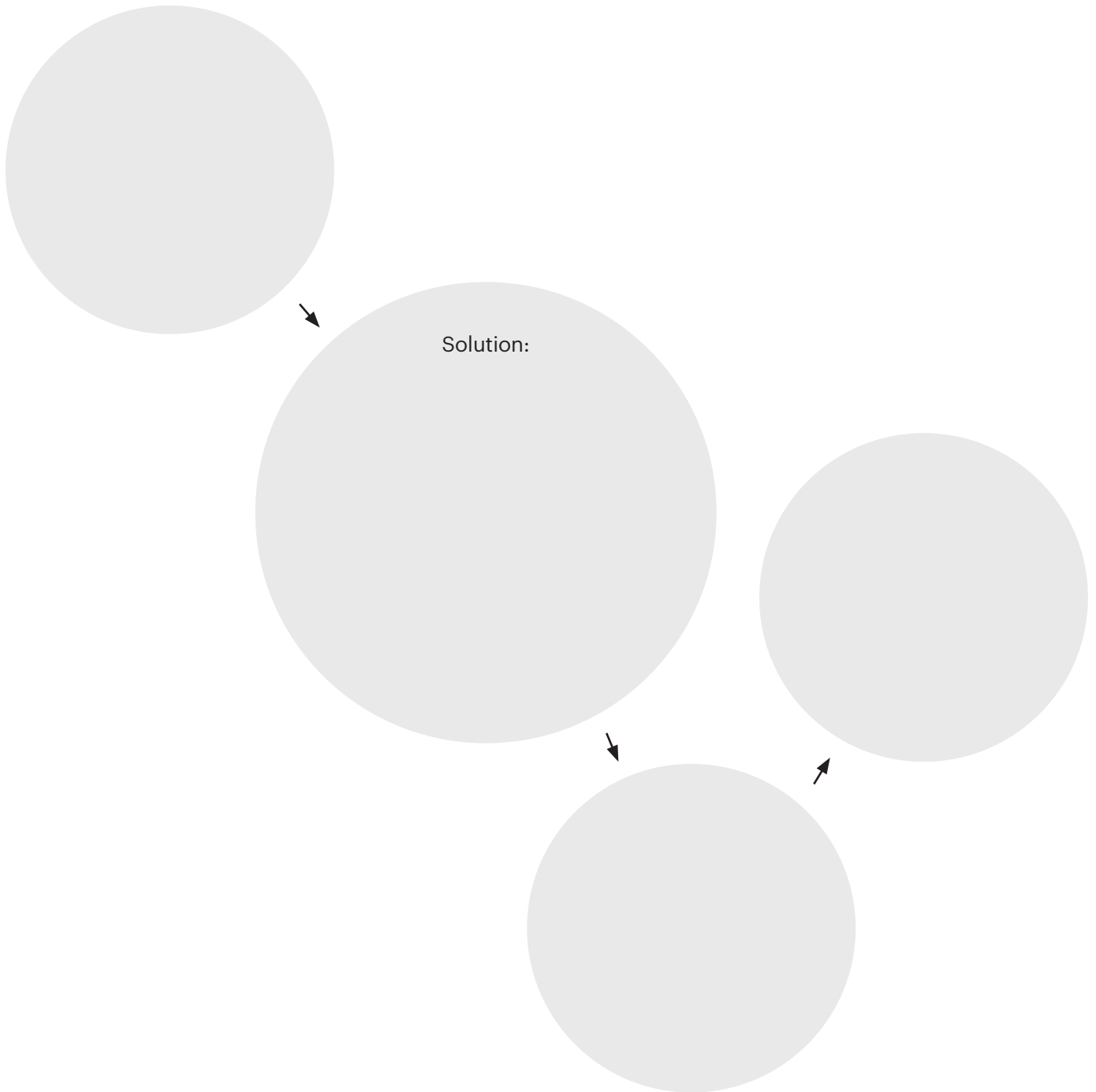
1	2	3
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4	5	6
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Imagine the Impact

A solution to a large problem can have a ripple effect: It not only solves the problem at hand, but can positively affect people's lives in many other ways as well.

Fill in the diagram below as you consider the many effects of your solution. Use the circles provided as a starting point, and then continue to add your own!



Step 1: Choose an Action

Select one way that you can take a stand and create change in your community or inspire people in your community to take their own stand. This action may fall into the *Educate*, *Empathize*, or *Act* categories. It may be an idea from the video, one that you or your classmates developed, or an entirely new idea.

I will create change by:

Then explain: Why is this action important? What effects will it have?

Step 2: Create a Plan

Break your idea into at least three smaller steps. As you do, try to include an existing tech resource or innovation to help accomplish your goal.

1.

2.

3.

4.

Step 3: Begin!

Now that you have a plan in place, get started on your first step and begin creating change.